

REMARKS

Claims 1-25 and 27-30 are pending in the application. By this Amendment Applicants have amended claims 1, 9, 17 and 28 in the manner discussed below.

Claim Rejections Under 35 U.S.C. §103 Based Upon Chaudri

The Examiner has rejected claims 1-5, 7, 9, 10, 15 and 27 under 35 U.S.C. 103(a) as being unpatentable over Chaudri et al in view of Lawande. Pending claim 1 is reproduced below for convenience of reference:

1 (Currently Amended) A method of processing data in a stateful protocol processing system, said method comprising:
receiving a first message of a first flow comprised of a first plurality of messages;
deriving a first event from said first message, said first event containing flow information identifying said first flow;
extracting said flow information from said first event;
retrieving, using said flow information, a first flow state characterizing said first flow, said first flow state including a first workspace portion and a second workspace portion;
assigning said first workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and
processing, consistent with a stateful protocol associated with said first flow, said first event using said first protocol processing core and said second protocol processing core.

With regard to the recitation of “said first event containing flow information identifying said first flow”, it appears to be the Examiner’s position that Chaudri at least describes a “message containing flow information identifying said first flow” (emphasis added) at col. 3, line 58. Applicant respectfully submits that Chaudri does not describe a message or event *containing* flow information identifying a flow, and in fact teaches away from such an arrangement by describing a process for identifying flows in data units through a recursive process:

During the recursions, a flow identification may be tested to determine if it is a final or specific flow identification and based on the test, the data unit may be identified as belonging to a particular flow. A current or default flow identification may also be assigned if a memory search for a new flow identification fails to find a flow identification in the memory.
(Chaudri, 3:55-61)

As is apparent from the above excerpt, Chaudri's process for identifying flows involves testing flow identifications and, based upon the test, potentially *assigning* a flow identification. This of course constitutes an entirely different process from including flow identifying information within an event or message from which it can be extracted or otherwise discerned. Accordingly, Applicant respectfully submits that Chaudri does not teach or suggest a message or event which itself contains information identifying a flow.

With respect to the recitation of "deriving a first event from said message", the Examiner states without explanation that this is disclosed by Chaudri as follows: "flow identifier may be attached to the packet" (Chaudri, col. 4, line 5). If the "packet" in this excerpt from Chaudri corresponds to the claimed "message", Applicant fails to appreciate how attaching a flow identifier to this packet in any way suggests deriving an event from the packet. Applicant observes that in the Chaudri system the flow identifier "attached to the packet" is determined through a recursive process, and is not in any way "derived" from the packet to which it is appended as suggested by the Examiner.

The correspondence alleged by the Examiner between the claimed recitation of "retrieving, using said flow information, a first flow state characterizing said first flow" and Chaudri's description at col. 3, lines 52-53 and mention of "flow definitions derived from said flow identifications" (col. 8, lines 12-13) is similarly not understood. These sections of Chaudri are set forth below:

The present invention identifies flows in data units by a recursive process of associating a flow identification with a data unit, embedding or associating rules with the flow id for extracting data from the data unit, and using the extracted data to perform a search in a memory for a next level recursion flow identification.

(3:50-55)

... said second dedicated hardware logic element for routing packets in accordance with flow definitions derived from said flow identifications provided by said data structures.

(8:10-13)

Applicant respectfully submits that these sections of Chaudri fail to describe "retrieving" flow state or any other information. Rather, in these excerpts Chaudri describes performing a

recursive process for identifying flows and for routing packets in accordance with flow definitions. Applicant respectfully submits that neither of these processes in any way relate to a "flow state" characterizing a flow or using flow information to retrieve such a flow state.

The Examiner concedes that Chaudri fails to describe the following elements of claim 1:

- said first flow state including a first workspace portion and a second workspace portion;
- assigning said first workspace portion to a first protocol processing core and said second workspace portion to a second protocol processing core; and
- processing, consistent with a stateful protocol associated with said first flow, said first event using said first protocol processing core and said second protocol processing core.

However, the Examiner contends that these elements are described by Lawande as follows:

The first processor accesses the first memory, obtaining the first packet identifier, and forms a data stream containing the first packet identifier. The second module has a second memory and a second processor, with the second memory containing a second packet identifier. The second processor has a comparator which compares the second packet identifier with the first packet identifier in the data stream.
(Lawande, 4:39-47)

Applicant respectfully submits that this portion of Lawande describes only a first memory containing a first packet identifier and a second memory containing a second packet identifier, wherein the first memory is accessible to the first processor and the second memory is accessible to the second processor. Lawande provides no indication, implicit or otherwise, that the first and second memories correspond to workspace portions of a flow state. Moreover, there is no indication that workspaces or other aspects of a flow state are assigned to be processed by the first and second processors of Lawande. Finally, Lawande provides no indication that the first and second processors operate to process the "packet identifiers" in the first and second memories in accordance with a stateful protocol. On the contrary, Lawande suggests otherwise by stating that the second processor includes a comparator which simply compares the first and second packet identifiers. Accordingly, Applicant respectfully submits that Lawande is inapposite to the invention as presently claimed.

Notwithstanding the above distinctions between aspects of the invention and the cited prior art, in order to expedite prosecution of the application the pending independent claims have been amended to further highlight at least one other distinguishing characteristic of the invention. In particular, the claims have been amended to recite that flow information is extracted from an event derived from a received message. As discussed above, Neither Chaudri nor Lawande describes either derivation of event information from a received message or the inclusion of flow information within such an event or message. Accordingly, it follows that neither Chaudri nor Lawande discloses the extraction or other discernment of flow information maintained within an event or message.

Applicant thus respectfully requests the Examiner to reconsider the outstanding rejection of claims 1-5, 7, 9, 10, 15 and 27 as being unpatentable over Chaudri in view of Lawande.

Applicant observes that the remaining rejections within the above Office Action are based upon Chaudri in view of Lawande in combination with various other prior art references. Because none of these other prior art references remedy the shortcomings of Chaudri and Lawande with respect to the pending independent claims, Applicant respectfully requests that the Examiner reconsider all of the outstanding rejections in the above Office Action in light of the arguments and amendments set forth herein.

Applicant respectfully requests consideration of the remarks herein prior to further examination of the above-identified application. The undersigned would of course be available to discuss the present application with the Examiner if, in the opinion of the Examiner, such a discussion could lead to resolution of any outstanding issues.

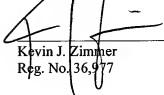
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